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VITAMIN D STATUS IN EGYPTIAN ADOLESCENT FEMALES WITH IRON DEFICIENCY ANEMIA AND ITS CORRELATION WITH SERUM IRON INDICES

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Background: In Egypt, it seems that adolescent girls are candidate for vitamin D deficiency (VDD), mostly due to inadequate sun exposure as a result of the culture and social dress codes. Currently there is growing evidence that VDD and iron deficiency anemia (IDA) are associated.

Aim: Investigate the frequency of VDD in adolescent females with IDA and demonstrate whether VD (vitamin D) level was correlated with serum iron indices.

Methods: Forty adolescent with IDA and 30 healthy control were compared to determine the degree of VD level; where VDD (≤ 20 ng/mL), VD insufficiency (20-30 ng/mL) and VD sufficiency (> 30 ng/mL). BMI, CBC, TIBC, serum ferritin, ionized calcium and 25(OH)D were measured.

Results: Subnormal VD was more frequent in the IDA group (75%) than control (40%); where 19 adolescent female patients (47.5%) were VD deficient, 11 (27.5%) were insufficient and 10 (25%) were sufficient; in control group VDD was present

in 4 (20%), VDI in 4 (20%) and VDS in 12 (60%) respectively. The mean level of VD was significantly lower in winter than summer (16.87 vs. 31.57 mg/dL, $P < 0.001$). Analysis of the factors potentially associated with D levels was performed, including BMI, season and serum iron profile, and we found no significant independent predictors of VD levels.

Conclusions: VDD has a high frequency in Egyptian adolescent females with IDA, however it is not significantly correlated with iron indices. Measurement of VD level in such patients, a procedure that is not currently a part of routine investigation, could be necessary.

Biography

Eman H EL-Adawy has completed her MD from Mansoura University. She is a Associate Professor of Internal Medicine and Endocrinology Department in Specialized Medical Hospital, Faculty of Medicine, Mansoura City, Egypt. She published more than 10 papers in reputed journals.

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